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(71) **Applicant (for all designated States except US):** **UNIVERSITY OF STRATHCLYDE** [GB/GB]; 16 Richmond Street, Glasgow G1 1XQ (GB).

(72) **Inventors; and**

(75) **Inventors/Applicants (for US only):** **ABRAM, Richard, H.** [GB/GB]; 1/3 Drumsheugh Gardens, Edinburgh EH3 7QJ (GB). **GARDNER, Kyle, S.** [GB/GB]; 10 Kirdkene Place, Newton Mearns, Glasgow, G77 5SB (GB). **RIIS, Erling** [DK/GB]; 8 Campsie Dene Road, Blanefield G63 9BN (GB).

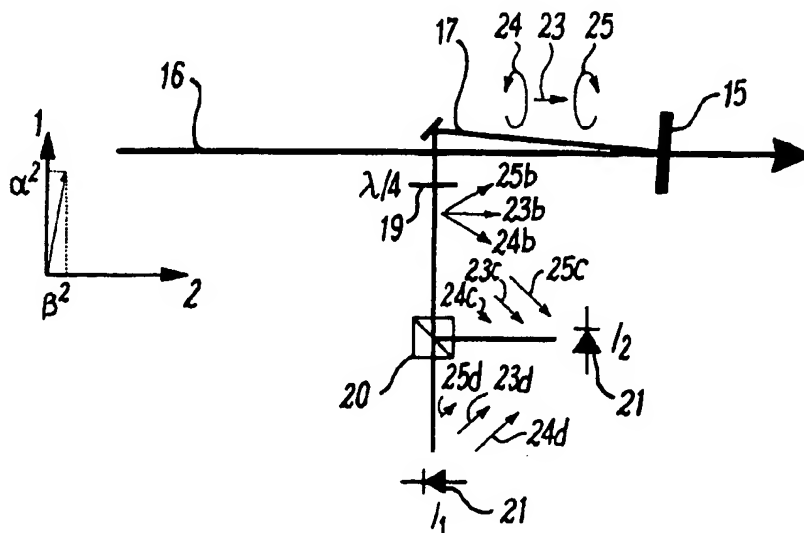
(74) **Agent:** **KENNEDYS PATENT AGENCY LIMITED;** Floor 5 Queens House, 29 St Vincent Place, Glasgow G1 2DT (US).

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(54) Title: IMPROVED MODE SELECTION AND FREQUENCY TUNING OF A LASER CAVITY



(57) **Abstract:** A technique for stabilising and scanning a cw-laser cavity (3) is demonstrated. The technique involves the incorporation of an intracavity birefringent etalon (15). Such an etalon provides a means for deriving a polarised electric field component (17) from an intracavity electric field (16) of the laser cavity, the orientation of polarisation of the polarised electric field component being dependent on the frequency and polarisation of the intracavity electric field (16). Appropriate analysis of this polarised electric field component (17) enables the laser cavity to be stabilised and frequency tuned while ensuring single mode operation.

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